SyAM Software* Server Monitor Local/Central* on a Microsoft* Windows* Operating System

Intel® Server Board S5000VSA with Internal Storage Focusing on IPMI Out of Band Management

Contents

Hardware Components

Quantity	Item	Manufacturer	Model
1	Intel® Server Board	Intel	S5000VSA
1	Intel® Server Chassis	Intel	SC5299-E
4 GB minimum	Memory	Any supported	
2	Intel® Xeon® Processor	Intel	Any supported
2 max	SATA 3.5" hard drives	Any supported	

Table 1 – Intel® Server Board S5000VSA Configuration Hardware

Software Used in the Installation

Dist. By	Description	File Name
Microsoft	Microsoft Windows 2003* Server	
Microsoft	Microsoft Windows 2000* Server (SP3 or above)	
Microsoft	Microsoft Windows XP* Professional (SP1 or above)	
Microsoft	Microsoft Windows 2000* Professional (SP3 or above)	
SyAM Software	V3.10 and above Server Monitor Local or Agent	
SyAM Software	V3.10 and above Server Monitor Central	

Table 2 - Software Bill of Materials

Introduction

This Intel® Enabled Server Acceleration Alliance (Intel® ESAA) recipe explains how to install and configure SyAM Software* Server Monitor Local or Agent (Local installs a web browser and a monitoring agent while installing Agent provides only a monitoring agent) on the Intel® Server Board S5000VSA with internal storage, It also explains how to install and configure SyAM Software* Server Monitor Central on a separate system so you will be able to perform IPMI out-of-band management to the Intel® Server Board S5000VSA. "Server Monitor Central" is referred to as "Central Manager" in the remainder of this recipe.

Configuration and Operating System Compatibility

SyAM Software* Central, Local or Agent can be installed on any Intel® 64 platform running one of the supported operating systems listed in figure 1:

Operating System	Server Monitor Central
Windows 2003 Server	■
Windows 2000 Server (SP3 or above)	■
Windows XP Professional (SP1 or above)	■
Windows 2000 Professional (SP3 or above)	■

Figure 1 – Operating System Compatibility of SyAM Software* Server Monitor and Central Manager

System Requirements

- 200-MB disk space

- 512-MB memory

- A valid operating TCP/IP network adapter

- A x86/x64 computer running a compatible operating system

- A password set for the *Administrator* account on the system

Browser Requirements

- Microsoft Internet Explorer* 6+ (Service Pack 1)

- Mozilla* Firefox* (V1.0.x or above)

Installation and Configuration

Pre-Install Considerations

This chapter provides step-by-step instructions for installing and configuring SyAM Software* Server Monitor on the Intel® Server Board S5000VSA and on a separate system, installing and configuring SyAM Software* Central Management* software on Microsoft* Windows* operating system platforms. Please remove any other hardware monitoring utilities installed because they may conflict with retrieving environmental data from the hardware. The following is required:

- SyAM Software* Server Monitor Local or Agent must be installed on the Intel® Server Board S5000VSA

- The SyAM Software* Central Manager software must be installed on a separate system. Multiple systems can be managed by browsing to this system.

- The Central Manager system must have a static IP address because other managed systems will send data to this system.

Installation Instructions – Microsoft* Windows*

1) Download the required product versions (http://syamsoftware.com/intel/downloads/downloads.php), double click the downloaded SyAM Software* executable and follow the install wizard instructions, or copy it from the SyAM Software* CD and choose the product version to install from the menu.
2) Choose the language of the user interface.
3) Choose the destination folder (this cannot contain any spaces in the name).

4) Do not change the RMI port default value of 1099 unless this port is being used by another application.

5) To enable security through 128-bit data encryption from the SyAM Software* server Web server to the browser, choose the SSL option. The default is "No".

6) After the installation has finished, the SyAM Software* services will start and dynamically discover and configure the system's monitoring environment.

SyAM Software* Windows* Program Menu Options

For Microsoft* Windows* installations, a set of options under the program's menu are provided. From the start menu, select "All Programs" > "SyAM". The following options appear (figure 2):

- Utilities

- Release Notes

- Remote Console User Settings

- Server Monitor Console

- User Manual
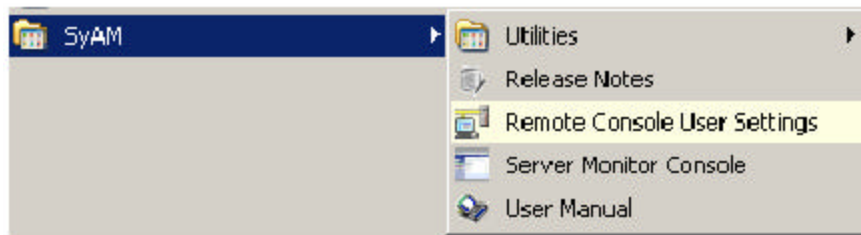
Figure 2 – SyAM Software* Program Menu Options

Under the "Utilities" sub-menu, the options are "Enable SCSI SMART Monitoring" and "XP-2003 Port Update", as shown in figure 3:
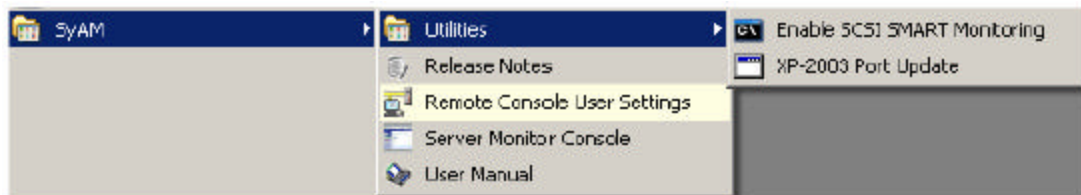
Figure 3 – SyAM Software* Program Menu; Utilities Options

If Microsoft* Windows* XP / 2003 Service packs are updated on the system after the software is installed, the required firewall port must be opened by running the "XP-2003 Port Update" from the "Utilities" option on the menu. This will open the required firewall ports and allow the software to properly function. By default, the system drives are SMART*-monitored for predictive-drive failure analysis if they are ATA or S-ATA. However, if the system utilizes a SCSI disk drive, choose "Enable SCSI SMART Monitoring" and reboot the system to enable this feature.

Firewall Security

The ports listed below are automatically opened on Microsoft* Windows 2003* and Microsoft* Windows XP* Pro systems during the installation:

- 3894: Used for Agent Management service
- 3895: Used for Central Management service
- 3930: Used for Web server service
- 5800: Used for remote console access from Central Manager
- 5900: Used for remote console access from Central Manager

Central Manager* Configuration

After installing SyAM Software* Server Monitor on the Intel® Server Board S5000VSA system you will need to add the system to the Central Manager.

- Browse to the system you installed Central Manager on and log in using the administrators user and password
- Select 'Add Managed Systems' from the drop down menu
- Enter the IP address of the Intel® Server Board S5000VSA and click the Apply button

- Refresh the screen by clicking on the Refresh button, The Intel® Server Board S5000VSA should now appear in the list of managed systems.

IPMI over LAN

Server Monitor* can provide IPMI over LAN power management and event log capabilities when the system is in an operating system-present or operating system-absent state by following these steps:

1) The Baseboard Management Controller's (BMC) IP address and password using the vendor-provided utilities must be configured before the IPMI over LAN feature can be utilized. Select the IPMI enabled system from the list of managed systems on the Central Manager* screen and click on the "Remote Management" icon.

In the **Remote Management** screen (see the following figure), select the *IPMI over LAN* tab.

Figure 4 – The Remote Management screen

2) Enter the user name, password and IP address of the BMC for the managed system in their respective fields.
3) Click the "Apply" button to save this data.
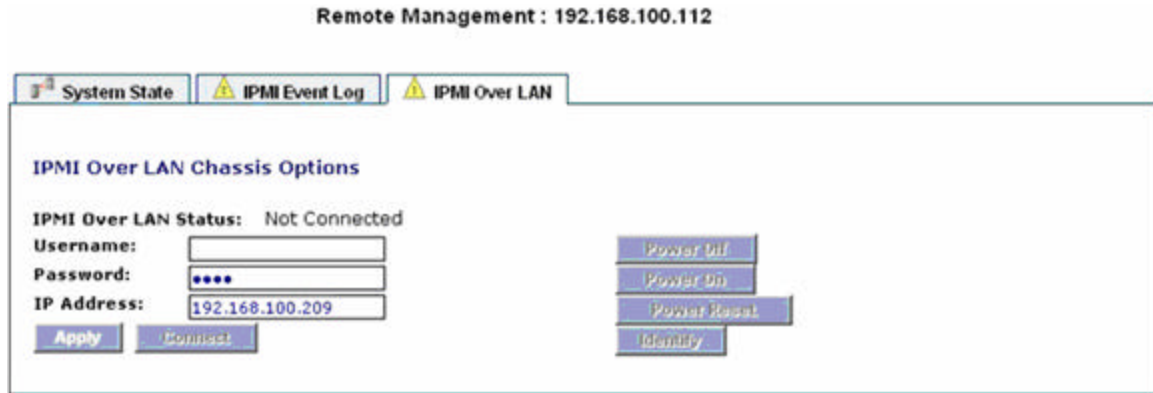
Figure 5 – IPMI over LAN Tab: Enter Details for Accessing the BMC

4) Once the user name, password and IP address are entered, click the "Connect" button to access the managed system's BMC over the LAN.

Figure 6 – IPMI over LAN Tab: Details Applied

Figure 7 – IPMI over LAN Tab: Connected Status

Once connected, the *IPMI over LAN* tab shows the status as "Connected", depicted in figure 7, and the following options may be performed:

- **Power Off:** Performs a forced power off instead of a graceful shutdown. The operating system may or may not receive notification and shut down. This varies depending on hardware platform.

- **Power On:** This will perform a forced power on.

- **Power Reset:** This will perform a power reset instead of a graceful reset. The operating system may or may not receive notification and shut down. This varies depending on hardware platform.

- **Identify:** This will light the identification LED of the system. This feature is not supported in all hardware platforms.

- **Event Log:** The IPMI event log is accessed in exactly the same manner described above.

IPMI Event Log

Server Monitor* can monitor managed physical events occurring on IPMI-enabled servers. These events are recorded in the IPMI event log, which is accessible through Central Manager*. Each event is numbered and dated. This information, as well as a description of the event type, sensor type affected, and event alert type, are recorded in the IPMI event log.

In addition, the IPMI event log lists the version of the log, the number of entries in the log, the last time an entry was added, the last time the log was cleared, and the amount of free space remaining for the log. The log can be reviewed/filtered by listing all events, or by filtering by an event range. The results can be displayed on the screen or exported to a file in a `.csv` format without clearing the log.

The IPMI event log allows administrators to retrieve and view all events that occur and are reported by a specific server. To access the IPMI event log, the system must be IPMI-enabled and running a valid version of Server Monitor*. Fields included in this screen are:

- IPMI version

- Number of entries in the log

- Last time an entry was made in the log

- Time of last log clear

- Free space
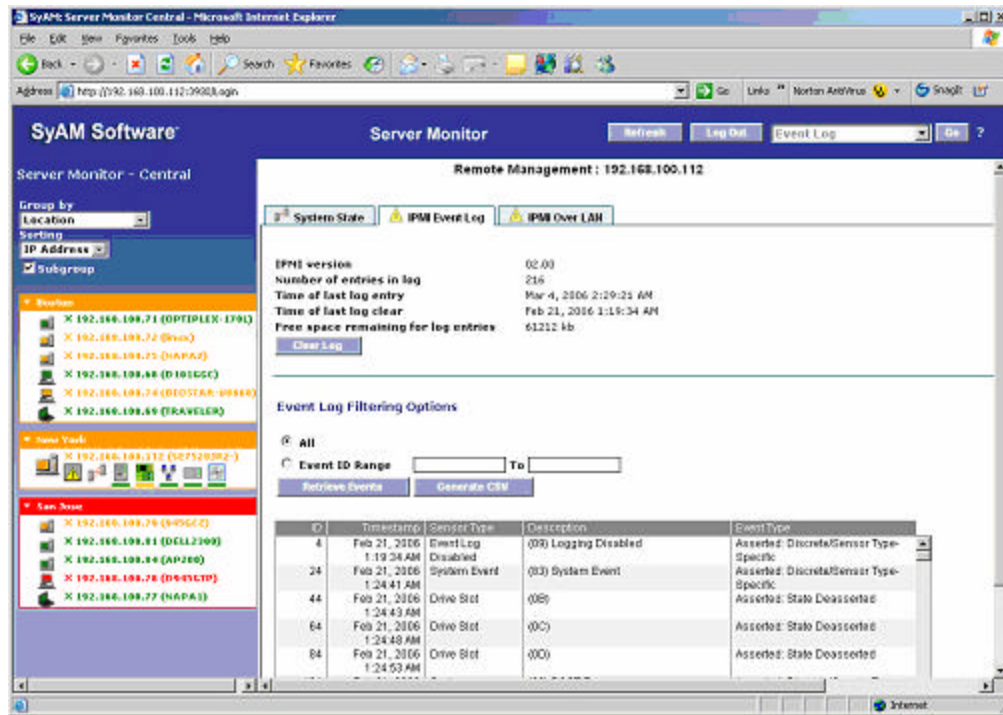
Figure 8 – IPMI Event Log

The IPMI event log provides administrators with the option to clear or purge the log by clicking the "Clear Log" button.

Note: *This action cannot be undone.*

IPMI Event Retrieval

The IPMI event log provides administrators with the option of retrieving and viewing some or all events recorded for the server, and sorting them by type.

To retrieve the events from the IPMI event log stored on the BMC, click the "All" radio button.

To retrieve a subset of events:

1) Enter a beginning and ending event ID. The beginning event ID value must be either "0" (to retrieve from the beginning of the log), or an actual event ID number. An error message is generated if a non-"0" event ID cannot be found.

2) Click the "Retrieve" button. The results will be displayed in the detail window at the bottom of the screen.

Figure 9 – IPMI Event Log Retrieval

The ID values assigned to events are generated by the IPMI controller and are dependent on how the system's firmware is configured. As a result, the event ID may differ based on server platform.

Generate CSV

This button retrieves the events and saves them to a CSV file.

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